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```

-- Your Name: Yichen Zhang
-- Your Student Number: 1299406
-- By submitting, you declare that this work was completed entirely by yourself.

--
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_____
-- BEGIN Q1
SELECT id AS publicationID,title
FROM publication
WHERE id NOT IN (
SELECT referencingPublicationID FROM referencing
);

-- END Q1
--
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-- BEGIN Q2
SELECT id AS publicationID, title, dateOfPublication
FROM publication
ORDER BY dateOFPublication DESC
LIMIT 1;

```
-- END Q2
--
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-- BEGIN Q3
SELECT publication.id AS publicationID,title
FROM publication
INNER JOIN coauthors ON publication.id = coauthors.publicationID
INNER JOIN researcher ON coauthors.authorID = researcher.id
WHERE firstname = 'Renata' AND lastname = 'Borovica-Gajic' AND (endpage -
startpage) >= 10;


-- END Q3
--
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-- BEGIN Q4
SELECT publication.id AS publicationID, publication.title,
COUNT(referencingPublicationID) AS citationCount
FROM publication
LEFT JOIN referencing ON publication.id = referencing.referencedPublicationId
GROUP BY publication.id
HAVING COUNT(referencingPublicationID) = (
      SELECT count(referencingPublicationID)
      FROM referencing
      GROUP BY referencedPublicationId
      ORDER by count(referencingPublicationID) DESC
      LIMIT 1
);


-- END Q4
--
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-- BEGIN Q5
SELECT publication.id AS publicationID, documentUrl
FROM publication
INNER JOIN publication_has_keyword ON publication.id =
publication_has_keyword.publicationID
INNER JOIN keyword ON keyword.id = publication_has_keyword.keywordId
WHERE (word = 'Databases') AND publication.id IN (
      SELECT referencedPublicationId FROM referencing
);


-- END Q5
--
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-- BEGIN Q6
```

```sql
SELECT DISTINCT firstName,lastName
FROM researcher
INNER JOIN coauthors ON coauthors.authorId = researcher.id
INNER JOIN referencing ON coauthors.publicationId =
referencing.referencedPublicationId
WHERE coauthors.authorId IN(
SELECT authorID
FROM coauthors
WHERE coauthors.PublicationID IN (
SELECT publicationId
FROM topten
)
)
GROUP BY researcher.id
HAVING COUNT(referencingPublicationID) >= 2;
```

-- END Q6
--
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-- BEGIN Q7
```sql
SELECT keyword.id AS keywordID,keyword.word
FROM keyword
INNER JOIN publication_has_keyword ON keyword.id =
publication_has_keyword.keywordId
INNER JOIN topten ON topten.publicationId = publication_has_keyword.publicationId
GROUP BY keyword.id
HAVING COUNT(DISTINCT topten.publicationId) = (
SELECT COUNT(DISTINCT topten.publicationId)
FROM publication_has_keyword
INNER JOIN topten ON topten.publicationId = publication_has_keyword.publicationID
GROUP BY publication_has_keyword.keywordId
ORDER BY COUNT(DISTINCT topten.publicationId) DESC
LIMIT 1
);
```

-- END Q7
--
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-- BEGIN Q8
```sql
SELECT firstName, lastName, COUNT(referencing.referencingPublicationId) AS
```

```
totalCitationCount
FROM researcher
LEFT JOIN coauthors ON coauthors.authorId = researcher.id
LEFT JOIN referencing ON coauthors.publicationId =
referencing.referencedPublicationId
GROUP BY researcher.id
HAVING COUNT(referencing.referencingPublicationId) = (
SELECT COUNT(referencing.referencingPublicationId)
FROM coauthors
LEFT JOIN referencing ON coauthors.publicationId =
referencing.referencedPublicationId
GROUP BY coauthors.authorId
ORDER BY COUNT(referencing.referencingPublicationId) DESC
LIMIT 1);



-- END Q8
--
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-- BEGIN Q9
SELECT DISTINCT data_base.firstName,data_base.lastName
FROM researcher AS data_base
INNER JOIN coauthors AS author1 ON data_base.id = author1.authorId
INNER JOIN coauthors AS author2 ON author2.publicationId = author1.publicationId
INNER JOIN researcher AS machine_learning on machine_learning.id = author2.authorId
WHERE data_base.id IN (
SELECT researcherID
FROM researcher_has_keyword
WHERE keywordId IN(SELECT id FROM keyword WHERE word = 'Databases')
)
AND machine_learning.id IN(
SELECT researcherID
FROM researcher_has_keyword
WHERE keywordId IN(SELECT id FROM keyword WHERE word = 'Machine learning')
)
AND data_base.id != machine_learning.id;



-- END Q9
--
_____
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-- BEGIN Q10
SELECT firstName, lastName
FROM researcher
WHERE researcher.id IN (
SELECT authorId
FROM coauthors
WHERE publicationId IN(
SELECT publication.id
FROM researcher
INNER JOIN coauthors ON researcher.id = coauthors.authorId
INNER JOIN publication ON publication.id = coauthors.publicationId
```

```sql
WHERE firstName = 'Renata' AND lastName = 'Borovica-Gajic' AND dateOfPublication <
'2023-01-01'
)
)
AND researcher.id NOT IN(
SELECT authorId
FROM coauthors
WHERE publicationId IN(
SELECT publication.id
FROM researcher
INNER JOIN coauthors ON researcher.id = coauthors.authorId
INNER JOIN publication ON publication.id = coauthors.publicationId
WHERE firstName = 'Renata' AND lastName = 'Borovica-Gajic' AND dateOfPublication >=
'2023-01-01'
)
)
AND firstName != 'Renata' AND lastName != 'Borovica-Gajic';
```

-- END Q10
--
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-- END OF ASSIGNMENT Do not write below this line